

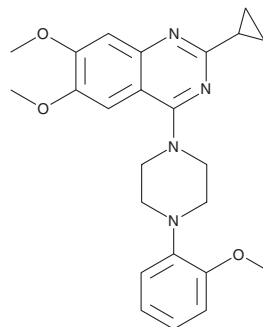
PRODUCT INFORMATION



ML-314

Item No. 19550

CAS Registry No.: 1448895-09-7
Formal Name: 2-cyclopropyl-6,7-dimethoxy-4-[4-(2-methoxyphenyl)-1-piperazinyl]-quinazoline
MF: C₂₄H₂₈N₄O₃
FW: 420.5
Purity: ≥98%
UV/Vis.: λ_{max}: 250, 318, 342 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

ML-314 is supplied as a crystalline solid. A stock solution may be made by dissolving the ML-314 in the solvent of choice, which should be purged with an inert gas. ML-314 is soluble in the organic solvent DMSO at concentrations of up to >100 mM.

Description

ML-314 is a neurotensin-1 receptor (NTS₁) agonist.^{1,2} It is selective for NTS₁ over NTS₂ in a cell-based assay of receptor/β-arrestin complex formation (EC₅₀s = 2 and >80 μM, respectively) but is inactive in an NTS₁ calcium flux assay (EC₅₀ = >80 μM) indicating that, in contrast to other NTS₁ agonists, it does not signal through the traditional G_q-coupled pathway.² ML-314 is also a positive allosteric modulator of NTS₁ that increases binding of radiolabeled neurotensin (Item No. 24717) to NTS₁ in a concentration-dependent manner.¹ It reduces locomotion in dopamine transporter knockout mice and methamphetamine-exposed mice when administered at doses of 20 and 10 to 30 mg/kg, respectively.² ML-314 (30 mg/kg) also reduces methamphetamine self-administration in rats.

References

1. Barak, L.S., Bai, Y., Peterson, S., *et al.* ML314: A biased neurotensin receptor ligand for methamphetamine abuse. *ACS Chem Biol.* **11(7)**, 1880-1890 (2016).
2. Peddibhotla, S., Hedrick, M.P., Hershberger, P.A., *et al.* Discovery of ML314, a brain penetrant non-peptidic β-arrestin biased agonist of the neurotensin NTR1 receptor. *ACS Med. Chem. Lett.* **4(9)**, 846-851 (2013).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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